

PATENT ABSTRACTS OF JAPAN

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(54) PRODUCTION OF MICROFOAM

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain the subject foam capable of attaining a lighter weight and reducing a use amount while suppressing lowering of strength because of containing many dispersed fine air cells by impregnating a resin with liquid CO₂ and foaming the resin.

SOLUTION: A resin is impregnated with liquid CO₂ and the resin is foamed. The liquid CO₂ is obtained by e.g. making internal pressure of the CO₂ be 200kgf at 5°C or 200kgf at 25°C. Preferably, the resin has ≥ 0.5 dipole moment, such as polyethylene terephthalate. When a resin having ≥ 0.5 dipole moment is used, a saturate impregnating amount of CO₂ can be $\geq 7\%$ (at 25°C, under 200kgf) and a micro foam of $\leq 5\mu\text{m}$ cell size and $\geq 1 \times 10^{10}$ pieces/cm³ cell density can preferably be obtained. Preferably, the impregnation is performed by setting at a temperature and a pressure in which CO₂ becomes to be a liquid state. The foaming may be performed by making the CO₂-impregnated resin under a condition of a reduced pressure and/or heated state.

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